



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2017-0900; Product Identifier 2017-NM-055-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; The Boeing Company Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to adopt a new airworthiness directive (AD) for all The Boeing Company Model 737-100, -200, -200C, -300, -400, and -500 series airplanes.

This proposed AD was prompted by a report of wire damage on a fuel boost pump power cable, and a separate report of a fuel tank explosion on a similarly equipped airplane.

This proposed AD would require the installation of new shielded wire bundles and convoluted liners within fuel tank conduits, and revision of the maintenance or inspection program, as applicable, to incorporate certain airworthiness limitations (AWLs). We are proposing this AD to address the unsafe condition on these products.

**DATES:** We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; Internet <https://www.myboeingfleet.com>. You may view this referenced service information at the FAA, Transport Standards Branch, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0900.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0900; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Christopher Baker, Aerospace Engineer, Propulsion Section, FAA, Seattle ACO Branch, 1601 Lind Avenue SW.,

Renton, WA 98057-3356; phone: 425-917-6498; fax: 425-917-6590; email:  
christopher.r.baker@faa.gov.

## **SUPPLEMENTARY INFORMATION:**

### **Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2017-0900; Product Identifier 2017-NM-055-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

### **Discussion**

This proposed AD is further rulemaking following the interim action of AD 2007-24-02, Amendment 39-15268 (72 FR 65446, November 21, 2007) (“AD 2007-24-02”), which applies to all Boeing Model 737-100, -200, -200C, -300, -400, and -500 series airplanes. AD 2007-24-02 was prompted by reports of a fuel tank explosion on a Boeing Model 727-200F airplane and chafed wires and a damaged wiring sleeve on a fuel boost pump power cable in a Boeing Model 737-300 airplane. AD 2007-24-02 requires repetitive detailed inspections for damage of the electrical wire and sleeve that run to the

fuel boost pump through a conduit in the fuel tank, to address potential electrical arcing between the wiring and the surrounding conduit that could result in arc-through of the conduit, consequent fire or explosion of the fuel tank, and subsequent loss of the airplane. The preamble to AD 2007-24-02 explains that its requirements are considered “interim action” and that we might consider further rulemaking. We now have determined that further rulemaking is necessary, and this proposed AD follows from that determination.

#### **Related Service Information under 1 CFR part 51**

We reviewed the following service information.

- Boeing Alert Service Bulletin 737-28A1273, Revision 1, dated March 14, 2017. This service information describes procedures for the installation of new shielded wire bundles and convoluted liners within fuel tank conduits.
- Boeing 737-100/200/200C/300/400/500 Airworthiness Limitations (AWLs)/Certification Maintenance Requirements (CMRs), D6-38278-CMR, dated May 2016. This service information describes new AWLs for inspecting the fuel tank wiring and conduits.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

#### **FAA’s Determination**

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

## **Proposed AD Requirements**

We considered a number of factors in determining whether to issue a new AD or to supersede AD 2007-24-02, including the size of the affected fleet and the consequent workload added by Boeing Alert Service Bulletin 737-28A1273, Revision 1, dated March 14, 2017. In light of this, the FAA has determined that the less burdensome approach is to issue a separate AD that includes only Boeing Alert Service Bulletin 737-28A1273, Revision 1, dated March 14, 2017. This proposed AD would not supersede AD 2007-24-02. Airplanes identified in the applicability of AD 2007-24-02 are required to continue to comply with the requirements of that AD until the corrective actions of this proposed AD are done, which would terminate the inspection and reporting requirements of AD 2007-24-02. This proposed AD is a separate AD action and would therefore require accomplishment of only those actions identified as “RC” (required for compliance) in the Accomplishment Instructions of Boeing Alert Service Bulletin 737-28A1273, Revision 1, dated March 14, 2017, described previously, except for differences between this proposed AD and the service information that are identified in the regulatory text of this proposed AD.

For information on the procedures and compliance times, see this service information at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0900.

This proposed AD would also require revisions to certain operator maintenance documents to include new Critical Design Configuration Control Limitations (CDCCLs). Compliance with these CDCCLs is required by 14 CFR 91.403(c). For airplanes that have been previously modified, altered, or repaired in the areas addressed by this

proposed AD, the operator may not be able to accomplish the actions described in the revisions. In this situation, to comply with 14 CFR 91.403(c), the operator must request approval for an alternative method of compliance according to paragraph (l) of this proposed AD. The request should include a description of changes to the required inspections that will ensure the continued operational safety of the airplane.

### **Explanation of Applicability**

Model 737 airplanes having line numbers 1 through 291 have a limit of validity (LOV) of 34,000 total flight cycles, and the actions proposed in this NPRM, as specified in Boeing Alert Service Bulletin 737-28A1273, Revision 1, dated March 14, 2017, would be required at a compliance time occurring after that LOV. Although operation of an airplane beyond its LOV is prohibited by 14 CFR 121.1115 and 129.115, this NPRM includes those airplanes in the applicability so that they are tracked in the event the LOV is extended in the future.

### **Costs of Compliance**

We estimate that this proposed AD affects 499 airplanes of U.S. registry. We estimate the following costs to comply with this proposed AD:

<b>Estimated costs</b>				
<b>Action</b>	<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
Installation	154 work-hours X \$85 per hour = \$13,090	\$5,561	\$18,651	\$9,306,849
Incorporation of Airworthiness Limitations	1 work-hour X \$85 per hour = \$85	\$0	\$85	\$42,415

## **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

This proposed AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to transport category airplanes to the Director of the System Oversight Division.

## **Regulatory Findings**

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States,

or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

#### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

#### **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

#### **PART 39 - AIRWORTHINESS DIRECTIVES**

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

**The Boeing Company:** Docket No. FAA-2017-0900; Product Identifier 2017-NM-055-AD.



**(a) Comments Due Date**

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

**(b) Affected ADs**

This AD affects AD 2007-24-02, Amendment 39-15268 (72 FR 65446, November 21, 2007) (“AD 2007-24-02”).

**(c) Applicability**

This AD applies to all The Boeing Company Model 737-100, -200, -200C, -300, -400, and -500 series airplanes, certificated in any category.

**(d) Subject**

Air Transport Association (ATA) of America Code 28, Fuel.

**(e) Unsafe Condition**

This AD was prompted by reports of chafed wires and a damaged wiring sleeve on a fuel boost pump power cable, and an on-ground fuel tank explosion. We are issuing this AD to prevent electrical arcing between the fuel boost pump power cable wiring and the surrounding conduit, which could lead to arc-through of the conduit, consequent fire or explosion of the fuel tank, and subsequent loss of the airplane.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Required Actions**

(1) For Group 1 and Group 2 airplanes identified in Boeing Alert Service Bulletin 737-28A1273, Revision 1, dated March 14, 2017: Except as required by paragraph (j) of this AD, at the applicable times specified in paragraph 1.E., “Compliance,” of Boeing

Alert Service Bulletin 737-28A1273, Revision 1, dated March 14, 2017, do all applicable actions identified as required for compliance (“RC”) in, and in accordance with, the Accomplishment Instructions of Boeing Alert Service Bulletin 737-28A1273, Revision 1, dated March 14, 2017.

(2) For airplanes identified as Group 3 in Boeing Alert Service Bulletin 737-28A1273, Revision 1, dated March 14, 2017: Within 120 days after the effective date of this AD, inspect the airplane and do all applicable corrective actions using a method approved in accordance with the procedures specified in paragraph (l) of this AD.

**(h) Revision of Maintenance or Inspection Program**

Within 60 days after the effective date of this AD: Revise the maintenance or inspection program, as applicable, to incorporate the applicable Airworthiness Limitations (AWLs) from Boeing 737-100/200/200C/300/400/500 Airworthiness Limitations (AWLs)/Certification Maintenance Requirements (CMRs), D6-38278-CMR, dated May 2016, as identified in paragraphs (h)(1) and (h)(2) of this AD.

(1) 28-AWL-18 and 28-AWL-26, “Fuel Boost Pump Wires In Conduit Installation – In Fuel Tank,” for Boeing Model 737-100, -200, and -200C series airplanes.

(2) 28-AWL-18 and 28-AWL-25, “Fuel Boost Pump Wires In Conduit Installation – In Fuel Tank,” for Boeing Model 737-300, -400, and -500 series airplanes.

**(i) No Alternative Critical Design Configuration Control Limitations (CDCCLs)**

After the maintenance or inspection program, as applicable, has been revised as required by paragraph (h) of this AD, no alternative CDCCLs may be used unless the

CDCCLs are approved as an alternative method of compliance (AMOC) in accordance with the procedures specified in paragraph (l) of this AD.

**(j) Exceptions to Service Information Specifications**

Where Boeing Alert Service Bulletin 737-28A1273, Revision 1, dated March 14, 2017, uses the phrase “after the original issue date of this service bulletin,” for purposes of determining compliance with the requirements of this AD, the phrase “after the effective date of this AD” must be used.

**(k) Terminating Action for Requirements of AD 2007-24-02**

Accomplishment of the actions required by paragraph (g) of this AD terminates all requirements of AD 2007-24-02.

**(l) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Los Angeles ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (m)(2) of this AD. Information may be emailed to: 9-ANM-LACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by the Boeing

Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Los Angeles ACO Branch, to make those findings. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(4) For service information that contains steps that are labeled as Required for Compliance (RC), the provisions of paragraphs (l)(4)(i) and (l)(4)(ii) of this AD apply.

(i) The steps labeled as RC, including substeps under an RC step and any figures identified in an RC step, must be done to comply with the AD. If a step or substep is labeled “RC Exempt,” then the RC requirement is removed from that step or substep. An AMOC is required for any deviations to RC steps, including substeps and identified figures.

(ii) Steps not labeled as RC may be deviated from using accepted methods in accordance with the operator’s maintenance or inspection program without obtaining approval of an AMOC, provided the RC steps, including substeps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition.

**(m) Related Information**

(1) For more information about this AD, contact Christopher Baker, Aerospace Engineer, Propulsion Section, FAA, Seattle ACO Branch, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6498; fax: 425-917-6590; email: christopher.r.baker@faa.gov.

(2) For information about AMOCs, contact Serj Harutunian, Aerospace Engineer, Propulsion Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard,

Lakewood, CA 90712-4137; phone: 562-627-5254; fax: 562-627-5210; email: serj.harutunian@faa.gov.

(3) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; Internet <https://www.myboeingfleet.com>. You may view this referenced service information at the FAA, Transport Standards Branch, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, Washington, on September 20, 2017.

Dionne Palermo,  
Acting Director,  
System Oversight Division,  
Aircraft Certification Service.

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